

REMARKS

In the Office Action dated April 23, 2003, the Examiner rejected claim 26 under 35 U.S.C. § 112, second paragraph, and rejected claims 1-30 under 35 U.S. C. § 103(a) as being unpatentable over Ireland et al. (U.S. Patent No. 6,266,666) in view of Jacobs et al. (U.S. Patent No. 6,385,643).

By this amendment, Applicants have amended claims 14, 25, and 26. In particular, claims 14 and 25 were amended to correct typographical errors and claim 26 was amended to correct a minor defect in the term "general computer language programming call." Based on these amendments and the following remarks, Applicants respectfully traverse the rejection of claim 26 under 35 U.S.C. § 112, second paragraph and the rejection of claims 1-30 under U.S.C. § 103(a).

The Rejection under 35 U.S.C. § 112, second paragraph

Applicants have amended claim 26 to change the phrase "general computer language programming call" to "general computer programming language command," which has antecedent basis from claim 25. Accordingly, Applicants submit that the rejection of this claim under 35 U.S.C. § 112, second paragraph, is now moot and requests that the rejection be withdrawn.

The Rejection under 35 U.S.C. § 103(a)

Appellants traverse the rejection of claims 1-30 under 35 U.S.C. § 103(a) because a prima facie case of obviousness has not been made by the Examiner. To establish a prima facie case of obviousness under 35 U.S.C. § 103(a), each of three

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requirements must be met. First, the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims (see M.P.E.P. § 2143.03 (8th ed. 2001)). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must “be found in the prior art, and not be based on applicant’s disclosure” (see M.P.E.P. § 2143 (8th ed. 2001)).

Applicants submit that the Examiner has failed to meet this burden for the following reasons.

Ireland et al. teaches a multi-tier distributed system that uses a Component Transaction Server (CTS) as a middle-tiered application server for facilitating communications between a client tier and a database server tier. The CTS receives requests from the client tier and returns results (e.g., objects or a collection of objects) to the client. Accordingly, Ireland et al. operates similar to conventional multi-tier systems in that the client may request data from a database through an application server (i.e., CTS).

In contrast, claim 1 recites a combination of steps including, among other things, receiving database record information at a client computer system from a database server, modifying the database record information at said client computer system using a first computer programming language, and transmitting the database record information with modification to an application server. Claim 1 also recites the steps of converting the modification to calls of a second computer programming language and

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executing the calls to invoke functions to cause record changes at the database server that correspond to the modifications to the database record information. Ireland et al. does not teach these recitations. For instance, although Ireland et al. allows a client to receive a result set from the CTS, the client does not modify any database information at the client's computer system. Instead, Ireland et al. operates similar to most common multi-tier systems in that a client requests information, and an application server processes the requests and returns corresponding results. Claim 1, on the other hand, states that the data base record information is modified at the client computer system in a first computing language and the modified record information is transmitted to an application server. Ireland et al. does not teach these features.

Also, the Examiner asserts that the "Structured Query Language" phrase in column 6, lines 33-38 of Ireland et al. teaches a first computing language, as recited in claim 1. Applicants disagree. A closer review of this citation reveals that Ireland et al. is referring to an exemplary technique for packaging client calls. These SQL packaged calls are not the same as a programming language used to modify database record information at a client computer system. Instead, the packaged calls of Ireland et al. are merely representations of information sent from the clients to the CTS.

Further, the Examiner alleges that the "database updates" referred to in column 7, lines 48-62 of Ireland et al. teaches the modifying step recited in claim 1. Applicants disagree. Ireland et al. refers to database updates in the context of the transaction management module 226 operating within the CTS (see Ireland et al., col. 7, lines 48-55). Thus, these updates are associated with transactions coordinated by the CTS and have no relationship to any modification operations within a client system. Accordingly,

the Examiner's interpretation of Ireland et al. is improper in light of the recitations of claim 1.

Additionally, the Examiner asserts that Ireland et al. teaches transmitting the database record information with modifications to an application server (see Office Action, page 3, lines 7-10). Applicants disagree. The citation relied upon by the Examiner merely describe the management functions of the CTS components, such as multi-tier database connections, client sessions, etc. Although the CTS may manage transactions for a client, Ireland et al. does not teach or suggest transmitting database record information that has been modified at a client system to an application server, as recited in claim 1. In contrast, the CTS taught by Ireland et al. may facilitate requests to access database data based on request commands issued from the client. The CTS does not receive modified database record information, as alleged by the Examiner. Accordingly, Applicants again submit that the Examiner's interpretation of Ireland et al. is improper in light of the recitations of claim 1.

The Examiner also asserts that Ireland et al.'s ability to convert Active X requests to Tabular Data Stream (TDS) protocol is the same as the converting step recited in claim 1 (see Office Action, page 3, lines 11-12). Applicants disagree. Claim 1 recites, among other things, converting the modifications, at the application server, to calls of a second computer programming language of a computer application. Converting requests to certain protocols is not the same as converting modifications to computer programming calls. The TDS protocol is used to facilitate communications between components in Ireland et al.'s system and has no relationship with calls of a computer programming language, in the context of the converting step of claim 1. Because

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protocol translating or tunneling is not the same as the converting modifications to calls of a second computer programming language, the Examiner is incorrect in assuming Ireland et al. teaches this recitation of claim 1.

The Examiner also asserts that Ireland et al. teaches "executing to invoke functions (see column 4, lines 39-44) to cause database record changes at said database server (230) that correspond to the modifications to the database record information" (see Office Action, page 3, lines 14-16). Applicants submit that the Examiner failed to address all of the recitations of the executing step recited in claim 1. For instance, claim 1 includes the step of executing the second computer programming language calls to invoke functions of the computer application to cause database record changes at said database server that correspond to the modifications to the database record information. The invocation capabilities of the clients taught by Ireland et al. have no relationship with executing programming calls at an application server. Instead, Ireland et al. merely describes the ability for a client to invoke classes at the CTS, which is different from executing calls to invoke functions to cause database record changes at the database server, as recited in claim 1.

Further, the Examiner asserts that the term "write data" disclosed by Ireland et al. in col. 10, lines 26-36 is the same as the term "modifications" recited in claim 1. Applicants disagree. The "write data" referred to by Ireland et al. is associated with streaming data to the client from the CTS, and has no relationship with database record changes being performed at a database server (see column 10, lines 11-17, which define the context for the description of the functions performed by the component transaction server, including the use of the "write data" phrase cited by the Examiner).

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Because Ireland et al. does not teach or suggest the recitations of claim, the Examiner has failed to show that the reference, taken alone or combined with another reference, teaches or suggests each and every element recited in the claim, as required under M.P.E.P. § 2143.03.

Notwithstanding the deficiencies of Ireland et al. as a reference for teaching or suggesting the recitations alleged by the Examiner, the Examiner also admits that this reference does not teach second computer programming language calls, as recited in claim 1. To compensate for these shortcomings, the Examiner cites the teachings of Jacobs et al. Applicants traverse the Examiner's position that Jacobs et al. in combination with Ireland et al., suggest the second programming language calls of the computer application, as recited in the claim.

Jacobs et al. teaches a clustered enterprise Java distributed system that uses different APIs, including the Remote Method Invocation interface, that allows an object to call methods of other remote objects. These teachings have no relationship or association with the converting step of claim 1. Although arguably, the Java interfaces are in a computer programming code (i.e., the Java programming language), the Examiner has not shown, and the reference does not teach or suggest, how the use of Java APIs in the environment taught by Jacobs et al. has any relationship with the recitations of claim 1, or the teachings of Ireland et al.

In addition to the reasons set forth above, Applicants traverse the Examiner's conclusion that these two references may be combined to teach the recitations of claim 1 because, among other things, there is no reasonable expectation of success in making the combination. In fact, Jacobs et al. teaches away from the environment of

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Ireland et al. For example, Jacobs et al. is directed to a clustered enterprise distributed processing system which is configured to avoid the disadvantages of conventional distributed architectures. In fact, Jacobs et al. clearly attempts to avoid the use of multi-tier architectures because of their inherent "disadvantages." (see Jacobs et al., col. 2, lines 46-55 and col. 3, lines 50-53). Accordingly, Applicants submit that there is no reasonable expectation of success in combining the teachings of Jacobs et al. with the system taught by Ireland et al. because the later reference is designed to avoid multi-tier architectures, such as those implemented by Ireland et al. Further, one skilled in the art would not look to Jacobs et al. to combine with Ireland et al. because of the references' divergent environments.

Because the Examiner has failed to establish a prima facie case of obviousness and Ireland et al. and Jacobs et al., alone or in combination, do not teach or suggest the recitations of claim 1, Applicants request that the rejection of this claim under 35 U.S.C. § 103(a) be withdrawn and the claim allowed.

Claims 2-9 depend from claim 1. As explained, claim 1 is distinguishable from Ireland et al. and Jacobs et al. Accordingly, claims 2-9 are also distinguishable from these references for at least the same reasons in connection with claim 1. Also, these references fail to teach or suggest the recitations of claims 2-9.

For example, contrary to the Examiner's assertions, the full two-phase commit protocol described by Ireland et al. is not the same as determining when a user has completed making changes to the database record information at the client computer system, as recited in claim 2. The commit protocol is related to transactions between components in system 200 of Ireland et al. and has no association to user based

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changes at the client systems. For example, for multi-database updates, the protocol may ensure that all requested transactions are completed before committing the system to the changes. This protocol is not related in any fashion to the determining step of claim 2. In fact, the reference is completely silent on a description of user initiated changes to database record information at a client system.

Further, the Examiner alleges that Ireland et al. teaches transmitting to the application server a list of changes made to the database record information, as recited in claim 3. The Examiner is incorrect. The “one or more packets” referred to by the Examiner (see Office Action, page 4, line 18) merely describes packets of information that may be packaged for communications to, for example, a database server (see Ireland et al., col. 6, lines 29-38). Nowhere does the reference teach or suggest a list as recited in claim 3. Ireland et al. merely processes requests as they are received from a client system. Also, multiple requests processed by the CTS are not a list of changes “made” because according to Ireland et al., the CTS generates results sets based on processed requests (i.e., database changes at the database server).

Further, Ireland et al., and Jacobs et al., alone or in combination do not teach or suggest, among other things, the application server determining that the changes to the database record information have been made from the list, as recited in claim 4.

Ireland et al., and Jacobs et al., alone or in combination do not teach or suggest inserting an element in a subset of a table at the client computer system, as recited in claim 5. For example, as explained above, Ireland et al. does not teach modifying database information at a client system, but instead allows such changes to take place at the database server tier. Claims 6-9 depend directly from claim 5. As explained

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claim 5 is distinguishable from Ireland et al., and Jacobs et al. Accordingly, claims 6-9 are also distinguishable from these references for at least the same reasons set forth for claim 5.

Because Ireland et al., and Jacobs et al., alone or in combination fail to teach the recitations of claims 2-9, Applicants request that the rejection of these claims under 35 U.S.C. §103(a) be withdrawn and the claims allowed.

Claim 10 includes a combination of steps including, among other things, identifying certain application instructions of an application, at said application server, that are operative to insert elements into a database record. The Examiner asserts that the "communication sessions" disclosed by Ireland et al. are equivalent to "application instructions." Applicants disagree. The communication sessions taught by Ireland et al. refer to communications between the CTS and clients. According to Ireland et al., a session may be associated with a period of time where the client has communication access to the CTS. These sessions have no relationship to application instructions that are operative to insert elements into a database record, much less a process of identifying these instructions, as recited in claim 10. Accordingly, Ireland et al. cannot teach the identifying step recited in this claim.

Moreover, it is unclear how the Examiner concludes that TDS protocol described by Ireland et al. is the same as enabling certain application instructions to be correlated to certain commands received from a client computer system, as recited in claim 10 (see Ireland et al., col. 8, lines 30-39, cited by the Examiner). The conversion of ActiveX requests to a TDS protocol does not show correlating commands received from a client system to certain application instructions. Further, the inability of the CTS to

support data insertion and table creation requests from a client actually supports Applicants' position that Ireland et al. cannot teach or suggest the correlation of commands to indicate the insertion of an element into a database record (see Ireland et al., col. 13, lines 36-39, cited by the Examiner). Additionally, the ability for a client in Ireland et al. to invoke a class or routine is not the same as executing selected instructions that correspond to certain commands, as recited in claim 10 (see Office Action, page 8, lines 16-17).

In addition to the shortcomings described above, Applicants also submit that the Examiner failed to properly address all of the recitations of claim 10. In the Office Action, the Examiner asserts that "modifications is read on write data" (see Office Action, page 8, lines 18-19). Applicants note that the term "modifications" is not recited in claim 10. Further, the "write data" disclosed by Ireland et al. is not the same as the execution of selected certain application instructions cause the invocation of a database call to insert certain elements into the database record, as recited in the claim. In fact, "write data" refers to information streamed from the CTS to a client when returning results (see Ireland et al., col. 10, lines 13-17 and 29-36).

The Examiner also admits that Ireland et al. does not teach identifying, enabling, and executing selected certain instructions of an application. To compensate for this deficiency, the Examiner cites Jacobs et al. and argues that it would have been obvious to one skilled in the art to combine this reference with Ireland et al. to suggest the recitations of claim 10. Applicants disagree with the Examiner's position for the following reasons.

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First, Jacobs et al. does not teach identifying, enabling, and executing selected certain instructions of an application in the context of Applicant's claimed invention. On the contrary, Jacobs et al. merely discusses the characteristics of "computer software," such as reconfiguration, routing, and support for various APIs (see Jacobs et al., col. 4, lines 1-13, cited by the Examiner). Moreover, Jacobs et al. describes logical connections (i.e., sockets) that thread process management in col. 8, lines 38-59, also cited by the Examiner. Neither of these citations presented by the Examiner relate to identifying, enabling, or selecting certain instructions, as recited in the context of claim 10. In fact, Jacobs et al. is completely silent on these claimed features. Also, the Examiner's assertion that these citations support the implied position that "execution takes place only after the commands have been identified" falls short of meeting the burden of providing evidence of any of the features recited in claim 10.

Second, notwithstanding the fact that Jacobs et al. does not teach the recitations asserted by the Examiner, Applicants also traverse the combination of this reference with Ireland et al. As explained with respect to claim 1, there is no reasonable expectation of success in combining these two references to suggest the recitations of claim 10 because Jacobs et al. teaches away from the environment employed by Ireland et al. Jacobs et al. is directed to a clustered enterprise distributed processing system that is configured to avoid the use of multi-tier architectures because of their inherent "disadvantages." (see Jacobs et al., col. 2, lines 46-55 and col. 3, lines 50-53). Because Ireland et al. incorporates a multi-tier architecture, one skilled in the art will recognize that there can be no reasonable expectation of success in combining the teachings of these two references.

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Because Ireland et al. and Jacobs et al., alone or in combination, fail to teach the recitations of claim 10, and the Examiner failed to make a prima facie case of obviousness in rejecting the claim, Applicants request that the rejection of claim 10 under 35 U.S.C. § 103(a) be withdrawn and the claim allowed.

Claims 11-19 depend from claim 10. As explained, claim 10 is distinguishable from Ireland et al. and Jacobs et al. Accordingly, claims 11-19 are also distinguishable from these references for at least the same reasons in connection with claim 10. Further, these references, alone or in combination, fail to teach or suggest the recitations of claims 11-19. For example, neither Ireland et al. and Jacobs et al. teach or suggest identifying create methods, as recited in claim 16. The "create a new data window" has absolutely no relationship to the recitations of claim 16. The fact that a user may create a new data window for illustrating that a method on a component can be made to look like a stored procedure (see Ireland et al., col. 9, lines 47-55, cited by the Examiner) is irrelevant to the step of identifying create methods during the enabling step, as recited in claim 10.

Because Ireland et al. and Jacobs et al., alone or in combination, fail to teach or suggest the recitations of claims 11-19, Applicants request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn and the claims allowed.

Further, contrary to the Examiner's assertions, Ireland et al. does not teach the identifying, exposing and mapping steps, as recited in claim 20. In fact, it is unclear to Applicants how the Examiner concludes that the disclosure in col. 8, line 48 to col. 9, line 4 teaches identifying first level software components, as recited in claim 20. This passage in Ireland et al. merely describes the general capabilities of the CTS, such as

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the use of interfaces to return tabular result sets. Moreover, Applicants question the Examiner's position that the passage in col. 10, lines 13-31 of Ireland et al. teaches the exposing step of claim 20. Here, Ireland et al. merely describes the general aspects of the CTS returning a result set back to a server. These features have no relationship, and do not teach, exposing the first level software components in associated with operations of sub-level components for accessing information contained in data input fields, as recited in claim 20.

Also, the same passage (e.g., col. 10, lines 13-31) fails to support the Examiner's position that Ireland et al. teaches the mapping step of claim 20. As explained above, Ireland et al. sends result data to the client from the CTS. Claim 20, on the other hand, includes the step of "mapping modification commands received, at the application server, from a client computer system..." Accordingly, Ireland et al. cannot teach the mapping step recited in claim 20.

The Examiner admits that Ireland et al. fails to teach sub-level software components for accessing input fields of a database. To address this deficiency, the Examiner refers to col. 8, line 66 to col. 9, line 8 of Jacobs et al. Applicants disagree with the Examiner's interpretation of the reference. The message forwarding capabilities of Jacobs et al. (described in columns 8 and 9) have no relationship to sub-level components of the first level software components recited in claim 20. In fact, Applicants fail to see any correlation between any of the recitations of claim 20 and the message forwarding capabilities of Jacobs et al. Accordingly, Jacobs et al. does not teach the sub-level components, as recited in claim 20.

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Further, as explained above with respect to claims 1 and 10, there is no reasonable expectation of success in combining Jacobs et al. with Ireland et al. to teach Applicants' claimed invention because Jacobs et al. teaches away from Ireland et al. (see previous arguments regarding the lack of a reasonable expectation of success in connection with claims 1 and 10).

Moreover, Jacobs et al. does not teach the executing step, as recited in claim 20. Contrary to the Examiner's assertions, the logical connections (i.e., sockets) and thread process management capabilities of the server and clients of Jacobs et al. (see Jacobs et al., col. 8, lines 38-59, cited by the Examiner) do not show executing identified software components to update a database in accordance with modifications received from a client computer system, as recited in the claim.

Because Ireland et al. and Jacobs et al., alone or in combination fail to teach the recitations of claim 20, and the Examiner failed to make a prima facie case of obviousness in rejecting the claim, Applicants request that the rejection of claim 20 under 35 U.S.C. § 103(a) be withdrawn and the claim allowed.

Claims 21-24 depend from claim 20. As explained, claim 20 is distinguishable from Ireland et al. and Jacobs et al. Accordingly, claims 21-24 are also distinguishable from these references for at least the same reasons in connection with claim 20, and Applicants request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn and the claims allowed.

Claim 25 includes recitation similar to those of claim 1. As explained, claim 1 is distinguishable from Ireland et al. and Jacobs et al. Accordingly, claim 25 is also distinguishable from these references for at least the same reasons in connection with

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claim 1. For instance, as explained, the protocol conversion capabilities of Ireland et al. is not the same as the converting step recited in claim 25. Also, these references do not teach or suggest, among other things, receiving at an application server the result of a query request as modified by a client computer system and determining the modifications made to the result of the query request, as recited in claim 25. Accordingly, Applicants request that the rejection of claim 25 under 35 U.S.C. § 103(a) be withdrawn and the claim allowed.

Claims 26-30 depend from claim 25. As explained, claim 25 is distinguishable from Ireland et al. and Jacobs et al. Accordingly, claims 26-30 are also distinguishable from these references for at least the same reasons in connection with claim 25, and Applicants request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn and the claims allowed.

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Conclusion

In view of the foregoing remarks, Applicant submits that this claimed invention, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore request the Examiner's reconsideration and reexamination of the application and the timely allowance of claims 1-30.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: July 22, 2003

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